

## **CHAPTER 1. PURPOSE OF AND NEED FOR ACTION**

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## INTRODUCTION

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The Colorado River in the Grand Canyon provides a unique combination of thrilling whitewater adventure and magnificent vistas of a remarkable geologic landscape, including remote and intimate side canyons. The river corridor is a band of desert and riparian habitats a mile beneath the rim's coniferous forests. The plants and animals that inhabit the inner canyon are beautifully adapted to the rigors of their harsh, variable environment. The river corridor also holds hundreds of archeological sites that serve as evidence of a long history of occupation by prehistoric people. For these reasons, a river trip through the Grand Canyon is one of the most sought after back-country experiences in the country, and nearly 22,000 visitors run the river annually.

Use on the Colorado River has increased exponentially since the Glen Canyon Dam was constructed in 1963, which resulted in a steady flow of water in the river and made river running feasible on a year-round basis. In 1967, 2,100 recreationists ran the river through Grand Canyon National Park; by 1972 that number had risen nearly eightfold to 16,500, exceeding total use during the 100-year period from 1870 through 1969. This sudden increase in use caused noticeable changes to the vulnerable inner canyon ecosystem and adverse effects on cultural resources. It has also caused dramatic changes in visitor experiences, especially during the peak season, when the river may be crowded and groups compete for access to campsites and attraction sites. The result is an entirely different experience than the solitary experiences that early users enjoyed. To help ensure the preservation of natural and cultural resources, as well as the special nature of the visitor experience, a *Colorado River Management Plan* was approved in 1980 and revised in 1981 and 1989. River use is currently being managed under the 1989 management plan. However, some problems identified in earlier plans remain or have become of greater concern, and new problems have arisen.

Grand Canyon National Park and the Hualapai Tribe share a boundary within the Grand Canyon and along the Colorado River for approximately 108 miles. Many river runners end their trips at Diamond Creek, while others begin their trips there, requiring the use of roads across Hualapai tribal lands for access. Other visitors access the reservation at helipads at Whitmore and Quartermaster on Hualapai land. Therefore, the Hualapai Tribe is a cooperating agency with the National Park Service to address management issues along the common boundary and impacts from river-related visitor use on tribal lands.

## PURPOSE OF THE ACTION

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The park's 1995 *General Management Plan* set as an objective the management of "the Colorado River corridor through Grand Canyon National Park to protect and preserve the resource in a wild and primitive condition" (NPS 1995b, 7). The *General Management Plan* also stated, "The Park's 1989 *Colorado River Management Plan* will be revised as needed to conform with the direction given in the management objectives of the *General Management Plan*. The use of motorboats will be addressed in the revised plan, along with other river management issues identified through the scoping process" (NPS 1995b, 57).

The purpose of the action is (1) to evaluate a range of reasonable alternatives and strategies to develop an improved framework for managing visitor use of the Colorado River corridor for at least the next 10 years, and (2) to adopt a revised *Colorado River Management Plan* that ensures compliance with federal laws, regulations, policies, previous planning decisions, the park's vision, and other mandates for the management of recreational use on the Colorado River through Grand Canyon National Park.

For the Hualapai Tribe, the purpose of the plan is to preserve and protect tribal traditions, culture, sovereignty, and resources for future generations and to cooperate on a government-to-government basis with local, state, and federal governments. The tribe is also a party to inter-governmental agreements with the National Park Service with respect to regulatory controls on adjoining federal and tribal lands.

## **NEED FOR THE ACTION**

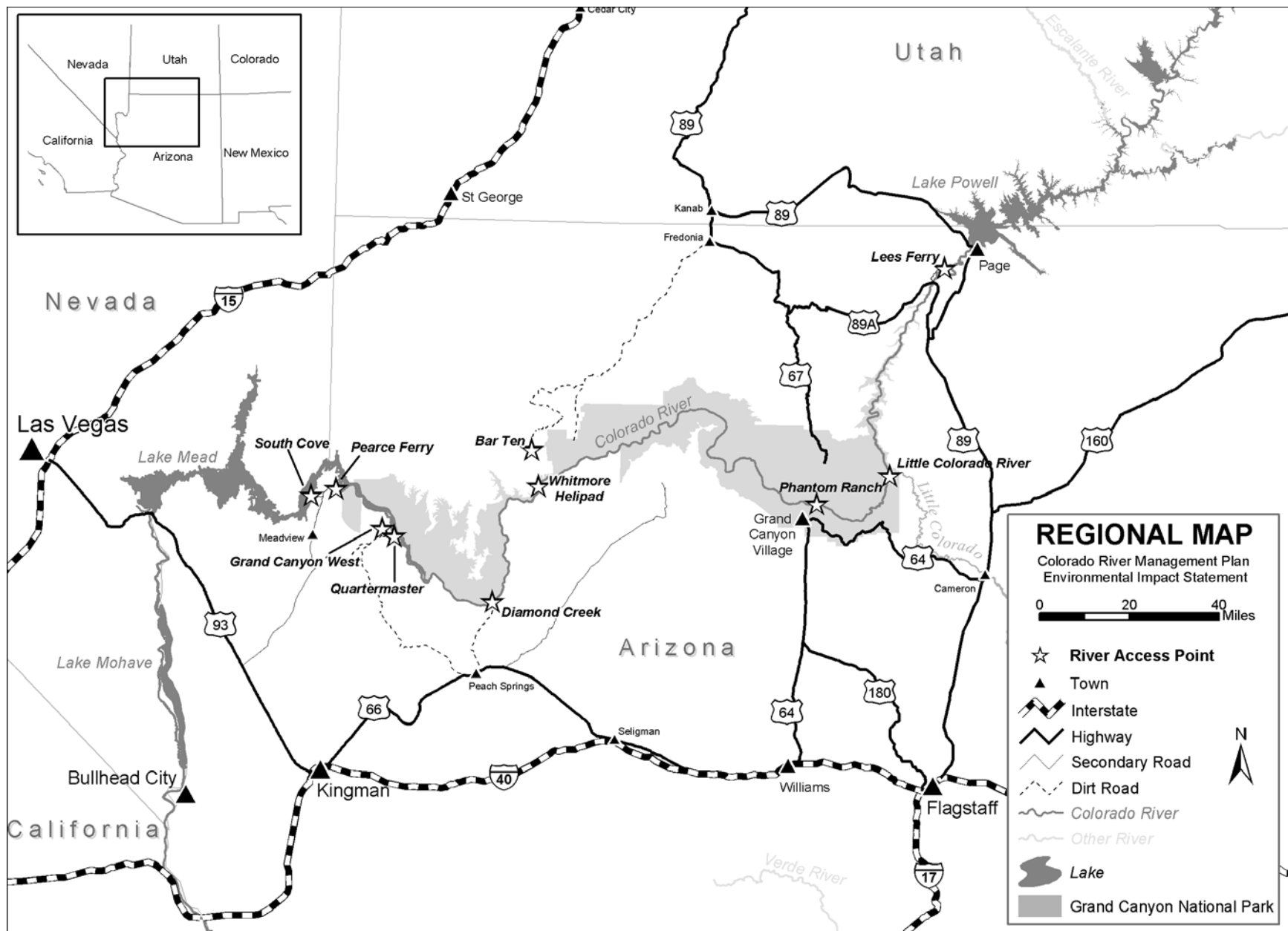
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A revised *Colorado River Management Plan* is needed to address both long-standing and recent issues concerning resource protection, visitor experience, and public services along the river; to consider the impacts of the National Park Service's river management on federally recognized American Indian tribes whose reservations adjoin Grand Canyon National Park; and to fulfill the requirements of a 2002 agreement that settled a lawsuit about the river management plan.

## **PUBLIC ISSUES AND CONCERNS**

Public issues and concerns regarding resource protection, visitor experience, and public services were raised during the 2002 public and internal scoping process. These include:

- appropriate levels of visitor use consistent with natural and cultural resource protection and visitor experience goals
- allocation of use between commercial and noncommercial groups, and seasonal distributions
- the noncommercial permit system
- appropriate levels of motorized and non-motorized boat use
- determination of the range of public services
- levels of helicopter use to transport river passengers to and from the river, seasonal use, and exchanges
- appropriate levels and types of upstream travel from Lake Mead
- quality of river trips (including crowding, trip length, group size, and scheduling issues)
- administrative use



## IMPACTS ON THE HUALAPAI TRIBE

The plan considers and analyzes the social and economic impacts of the various alternatives on the Hualapai Indian Tribe and its trust resources. The Hualapai Indian Reservation and park share a 108-mile-long boundary in the Lower Gorge of the Grand Canyon. Many park visitors cross the reservation on an unpaved road to access the river at Diamond Creek; other park visitors utilize helipads located on reservation lands in or near the canyon. The United States has a trust responsibility to protect tribal lands and waters. Furthermore, the National Park Service and the Hualapai Tribe have entered into an agreement to cooperate and collaborate with each other to resolve issues of common concern in an “Area of Cooperation,” which the agreement defines as the area from high water mark to high water mark from about River Mile (RM) 164.5 to Lake Mead National Recreation Area. The tribe has acted as a cooperating agency in the preparation of this plan.

## PREVIOUS PLANNING EFFORTS AND THE 2000 LAWSUIT

In 1980 over 90% of Grand Canyon National Park was recommended for designation as wilderness, and the Colorado River corridor was recommended as potential wilderness pending the removal of motorboats as a use that is incompatible with wilderness values. The *Wilderness Recommendation* was revised and reaffirmed in 1993. NPS policy requires that a management plan be developed for backcountry areas that are recommended as wilderness or as potential wilderness, but that have not been designated by Congress. In June 1998 the park released a *Draft Wilderness Management Plan and Environmental Assessment*.

### GUIDING PRINCIPLES

Guiding principles for revising the *Colorado River Management Plan* were initially developed in 1997 and subsequently updated in 2002. These principles, which were presented to the public at the scoping meetings during summer and fall 2002, relate to the purpose of and need for this planning process:

1. The revised *Colorado River Management Plan* will address resource management and visitor experience along the Colorado River corridor in Grand Canyon National Park within the framework of current NPS laws and directives.
2. Until the Secretary of the Interior, the President, and Congress act on the Grand Canyon *Wilderness Recommendation*, this section of the Colorado River will be managed as potential wilderness according to NPS *Management Policies* and the Grand Canyon *Wilderness Recommendation*, as updated in 1993.
3. Grand Canyon National Park managers will include and consult with Native American tribes in the planning process.
4. River use will be regulated to ensure that the level and types of use are sustainable and that resource impacts are within acceptable limits for long-term resource preservation.
5. Methods to manage and distribute use along the river will promote meeting objectives for resource protection and visitor experience.
6. The use allocation and permitting processes will be assessed with regard to their usefulness in meeting current and desired future conditions.
7. The allocation and specification of future river-outfitter contracts and noncommercial river use permits will be the primary tool for achieving the spectrum of desired visitor experience opportunities, consistent with the protection of park resources and values.
8. Grand Canyon National Park managers will seek to reduce noise that detracts from Grand Canyon's natural quiet, the park's natural soundscape.
9. Grand Canyon National Park managers will seek to minimize the impacts of administrative use.

In the summer of 1997 park staff initiated a review of the 1989 *Colorado River Management Plan*, with the intent of revising the plan in accordance with the *General Management Plan*. Upon release of the *Draft Wilderness Management Plan* in June 1998, the public questioned how that plan related to the *Wilderness Recommendation* and to the ongoing revision of the *Colorado River Management Plan*. As a result, park staff considered developing a combined plan for the backcountry and river resources of the park's proposed and potential wilderness areas.

In February 2000 the National Park Service halted the process of revising the river management plan and ceased efforts to develop a combined plan for backcountry management and the Colorado River. The decision was based on the difficulty of resolving several issues prior to further action on the park's *Wilderness Recommendation*, and the lack of fiscal and human resources to complete a comprehensive planning effort.

In July 2000 a lawsuit was filed in U.S. District Court for the District of Arizona (*GCPBA et al. v. Alston et al.*) to compel the park to resume the process of reviewing and revising the 1989 *Colorado River Management Plan*. The settlement agreement for the lawsuit, reached in January 2002, required the park to re-initiate the Colorado River planning process and to address specific issues, including allocation of use between commercial and noncommercial users, and the appropriate level of motorized rafting use. Under the settlement agreement, a final environmental impact statement for a revised *Colorado River Management Plan* must be issued by December 31, 2004. Work will then begin to revise the *Backcountry Management Plan*.

## **DIRECTION FOR THIS PLAN**

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### **NPS LEGISLATIVE AND MANAGEMENT CONSTRAINTS**

The National Park Service Organic Act of 1916 directs the Department of the Interior and the National Park Service to manage units of the national park system “to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (16 U.S.C. 1). Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978, which states that the National Park Service must conduct its actions in a manner that will ensure no “derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically directed by Congress” (16 U.S.C. 1a-1).

Within these mandates, the Organic Act and its amendments afford the National Park Service latitude to make resource decisions that balance visitor recreation and resource preservation. By these acts, Congress “empowered [the National Park Service] with the authority to determine what uses of park resources are proper and what proportion of the parks resources are available for each use” (*Bicycle Trails Council of Marin v. Babbitt*, 82 F.3d 1445, 1453 (9th Cir. 1996)).

Courts have consistently interpreted the Organic Act and its amendments to elevate resource conservation above visitor recreation. For example:

*Michigan United Conservation Clubs v. Lujan*, 949 F.2d 202, 206 (6th Cir. 1991) states, “Congress placed specific emphasis on conservation.”

The *National Rifle Association of America v. Potter*, 628 F. Supp. 903, 909 (D.D.C. 1986) states, “In the Organic Act Congress speaks of but a single purpose, namely, conservation.”

In its *Management Policies 2001*, the National Park Service recognizes that resource conservation takes precedence over visitor recreation. Section 1.4.3 states “when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation is to be predominant” (NPS 2000d). Because conservation is predominant, the National Park Service seeks to avoid or to minimize adverse impacts on park resources and values. In addition, Section 1.4.3 also recognizes that the National Park Service has discretion to allow negative impacts when necessary. However, the National Park Service cannot allow an adverse impact that constitutes resource impairment (NPS 2000d).

The Organic Act prohibits actions that permanently impair park resources unless a law directly and specifically allows for such actions (16 U.S.C. 1a-1). As stated in the *Management Policies*, an action constitutes an impairment when its impacts “harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values” (NPS 2000d, sec. 1.4.5). To determine impairment, the National Park Service must evaluate “the particular resources and values that would be affected; the severity, duration, and timing of the impact in question and other impacts.”

Park units vary based on their enabling legislation, missions, and natural and cultural resources. Therefore, the recreational activities appropriate for each unit and for areas within each unit vary. An action appropriate in one unit could impair resources in another unit. Thus, in Chapter 4 the context, duration, timing, and intensity of impacts related to river recreational use on the Colorado River are analyzed, as well as the potential for resource impairment.

In addition to the NPS *Management Policies 2001*, which set the framework and provide policy direction for decision making in the administration of the national park system and NPS programs, Director’s Orders may prescribe supplemental operating policies, specific instructions, requirements, or standards applicable to NPS functions, programs and activities. They may also delegate authority and assign responsibility. This environmental impact statement conforms with the guidelines presented in *Director’s Order #12: Conservation Planning, Environmental Impact Analysis and Decision-making* and its implementing handbook (NPS 2001b).

The laws, regulations, and orders affecting the management of Grand Canyon National Park and its resources are listed in Appendix A.

## **HUALAPAI CONSTITUTION AND MEMORANDUM OF UNDERSTANDING**

The Hualapai Indian Reservation, which was established on January 4, 1883, by President Chester Arthur, was created for the sole benefit of the Hualapai Tribe and its people. The tribe is governed by a constitution revised October 22, 1955, and approved by the Secretary of the Interior on January 16, 1956. The Hualapai Constitution authorizes the tribal council to make and enforce laws within the exterior boundaries of the reservation for the benefit of tribal members. The Tribal Law and Order Code of December 6, 1975, and the Hualapai Environmental Review Code of August 4, 1997, are the laws generally enforced on the reservation. These laws require all non-tribal members to have permits for visiting the reservation.



In 2000 Grand Canyon National Park, Lake Mead National Recreation Area, and the Hualapai Tribe initiated consultation to address management issues on the Colorado River. Grand Canyon National Park, Lake Mead National Recreation Area, and the Hualapai Tribe executed a “Memorandum of Understanding” in October 2000. The memorandum defines an “area of cooperation” as that portion of the Colorado River extending from approximately RM 165 (National Canyon) to RM 277 (the Grand Canyon National Park / Lake Mead National Recreation Area boundary). The agreement provides a process for mutually developing operational and management protocols for this area of cooperation. This process includes quarterly meetings of the Core Team, which is made up of the superintendents and the deputy superintendents of Grand Canyon National Park and Lake Mead National Recreation Area, as well as the chair and the vice chair of the Hualapai Tribe. Core Team participants seek to cooperatively develop protocols and regulations for the use of the lower Grand Canyon from National Canyon to Lake Mead.

When the park re-initiated the river management planning process in accordance with the 2002 settlement agreement, the Hualapai Tribe requested and was granted cooperating agency status for the preparation of the environmental impact statement. In accordance with the Council on Environmental Quality’s (CEQ) “Regulations for Implementing the National Environmental Policy Act” (40 CFR 1501.6), lead agencies “use the environmental analysis and proposals of cooperating agencies with jurisdiction by law or special expertise, to the maximum extent possible.” The Hualapai Tribe provided essential data on the affected environment and assisted in the development of alternatives and mitigation measures.

## **PARK ESTABLISHMENT, MANAGEMENT, PURPOSE, AND SIGNIFICANCE**

National park system units are established by Congress to fulfill specific purposes, based on the unit’s unique and significant resources. A park’s purpose, as established by Congress, is the foundation on which later management decisions are based to conserve resources while providing for the enjoyment of future generations. This mission is further discussed and clarified in *Management Policies 2001* (NPS 2000d).

On January 11, 1908, President Theodore Roosevelt signed Presidential Proclamation 794, reserving land in the Grand Canyon of Arizona as the Grand Canyon National Monument. The proclamation stated that the Grand Canyon of Arizona “is an object of unusual scientific interest, being the greatest eroded canyon in the United States, and it appears that the public interest would be promoted by reserving it as a National Monument.”

On February 26, 1919, Congress set apart Grand Canyon National Park “as a public park for the benefit and enjoyment of the people” (Grand Canyon National Park Establishment Act, 40 Stat. 1175). Over the years the park has been enlarged and its boundaries revised, most recently on January 3, 1975, when Congress recognized “that the entire Grand Canyon, from the mouth of the Paria River to the Grand Wash Cliffs, including tributary side canyons and surrounding plateaus, is a natural feature of national and international significance” (Grand Canyon National Park Enlargement Act, Public Law 93-620). Congress also recognized the need for “further protection and interpretation of the Grand Canyon in accordance with its true significance.”

The National Park Service Organic Act (16 U.S.C. 1 et seq.) sets the fundamental mission of the National Park Service, which can be stated as follows:

The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

The park's enabling legislation states:

The secretary shall administer, protect, and develop the Grand Canyon National Park in accordance with the provision of the [Organic Act] . . . and with any other statutory authority available to him for the conservation and management of natural resources (16 U.S.C. 1 et seq.).

The significance of Grand Canyon National Park and its broad mission goals are derived from its enabling legislation and stated in the 1995 *General Management Plan* (see the text box).

#### Purpose and Significance of Grand Canyon National Park

The **purpose** of Grand Canyon National Park is based on the park's enabling legislation and the legislation governing the National Park Service, and it is restated in the 1995 *General Management Plan* (NPS 1995b, 1). As a place of national and global importance, Grand Canyon National Park is to be managed to:

- preserve and protect its natural and cultural resources and ecological processes, as well as its scenic, aesthetic, and scientific values
- provide opportunities for visitors to experience and understand the environmental interrelationships, resources, and values of the Grand Canyon without impairing the resources.

The national and international **significance** of Grand Canyon National Park is for the following reasons (NPS 1995b):

- As a world heritage site, the Grand Canyon is recognized as a place of universal value, containing superlative natural and cultural features that should be preserved as part of the heritage of all people.
- The park serves as an ecological refuge, with relatively undisturbed remnants of dwindling ecosystems (such as boreal forest and desert riparian communities), and numerous rare, endemic, or specially protected (threatened/endangered) plant and animal species.
- The geologic record of the Grand Canyon is particularly well-exposed and includes a rich and diverse fossil record. The canyon also contains a great diversity of geological features and rock types.
- Numerous caves in the park contain extensive and significant geological, paleontological, archeological, and biological resources.
- The park serves as a natural gene pool because of its biological diversity and unique conditions.
- Six American Indian groups, represented by eight tribal governments, have close and sacred cultural ties to the Grand Canyon, with some considering the canyon their original homeland and place of origin.
- Over 4,500 years of human occupation have resulted in an extensive archeological record, hundreds of miles of established prehistoric and historic routes and trails, and nationally significant examples of rustic architecture.
- The Grand Canyon has internationally recognized scenic vistas, qualities, and values.
- The Grand Canyon is recognized as a place with unusual and noticeable natural quiet and direct access to numerous opportunities for solitude.
- All of the natural, cultural, and scenic qualities of the Grand Canyon, coupled with the canyon's vast size, give rise to inspirational/spiritual values and a sense of timelessness.
- The vast majority of the park provides opportunities for wilderness experiences.
- The Colorado River, as it flows through the park, provides opportunities for one of the world's premier river experiences, including one of the longest stretches of navigable white water on earth.

## VISION FOR THE PLAN

### ***National Park Service***

The 1995 *General Management Plan* outlines a vision for managing resources and visitor experiences for undeveloped areas in the park, including the Colorado River. The following vision statement for the river corridor is based on the vision in the 1995 plan and was revised to reflect public comments received during this planning process:

The Colorado River corridor in Grand Canyon National Park will be managed to provide a wilderness river experience in which visitors can intimately relate to the majesty of the Grand Canyon and its natural and cultural resources. Visitors traveling through the canyon on the Colorado River will have the opportunity for a variety of personal outdoor experiences, ranging from solitary to social, with as little influence from the modern world as possible. The Colorado River corridor will be protected and preserved in a wild and primitive condition.

A key part of this vision is the concept of a “wilderness river experience.” Areas recommended or eligible for wilderness designation, including the Colorado River, “offer visitors opportunities for solitude and primitive recreation. The management of these areas should preserve the wilderness values and character” (NPS 1995b, 6). Components of a “wilderness river experience” include:

- The natural sound, silence, smells, and sights of the canyon and the river predominate over those that are human-caused.
- Outstanding opportunities are provided for solitude or a primitive and unconfined type of recreation.
- The river is experienced on its own terms (that is, visitors accept an undeveloped, primitive environment and assume the potential risks and responsibilities).
- The natural and cultural objects in the riparian zone and side canyons are viewed in a state as little affected as possible by people, given the existence of dams on the Colorado River.
- The effect of the river runner’s presence is temporary rather than long lasting.

### ***Hualapai Tribe***

The vision of the Hualapai Tribe is to protect the resources of the tribe and to provide for the development of economic opportunities for existing and future members of the tribe. The tribe has limited economic resource potential and looks to the Colorado River corridor as a source of growth for tribal economic development and employment.

## OBJECTIVES IN TAKING ACTION

Objectives define what must be achieved to a large degree for the action to be considered a success (NPS 2001c). All action alternatives selected for detailed analysis must substantially meet all objectives, as well as address the purpose of and need for action. Objectives for

managing recreational use on the Colorado River in Grand Canyon National Park are presented below by resource. They are grounded in the park's enabling legislation, mandates, purpose, and significance, as well as the *General Management Plan* and other management documents. However, the management objectives in the *General Management Plan* were developed with the presumption that discrete objectives would be developed specifically for the *Colorado River Management Plan*. The *General Management Plan* objectives are by their nature general, and they do not consider the specific relationship of Grand Canyon National Park and the Hualapai Tribe relative to management of the Colorado River. Therefore, the management objectives in the *General Management Plan* relating to resource conditions may not necessarily apply in their entirety to the Lower Gorge section of the river.

**TABLE 1-1: MANAGEMENT OBJECTIVES — GENERAL MANAGEMENT PLAN AND COLORADO RIVER MANAGEMENT PLAN**

Resource	General Management Plan Management Objectives	Colorado River Management Plan Management Objectives
<b>Natural Resources</b>		
•Soils	Preserve, protect and interpret the park's natural and scenic resources and values, and its ecological processes.	Preserve and protect natural soil conditions by minimizing impacts to soils from river recreational activities.
•Water Quality	Preserve natural spring and stream flows and water quality.	Manage river recreation use in a manner that minimizes adverse chemical, physical, and biological changes to the water quality in the main stem of the Colorado River and its tributaries, seeps, and springs.
•Air Quality	Preserve, protect, and improve air quality and related values such as visibility.	Manage river recreational use to ensure that exhaust emissions from river recreation related vessels do not degrade ambient air quality below EPA standards or cause major adverse impacts to air quality related values.
•Natural Soundscape	Protect the natural quiet and solitude of the park, and mitigate or eliminate the effects of activities causing excessive or unnecessary noise in, over, or adjacent to the park.	Manage river recreational use in a manner that is consistent with management zoning while minimizing the adverse effects of human caused noise impacts to the natural soundscape or natural quiet.
•Caves and Paleontological Resources	Preserve, protect, and interpret the park's natural and scenic resources and values, and its ecological processes. Preserve, manage, and interpret cultural resources for the benefit of present and future generations.	Manage river use to ensure compliance with cave closures and provide for protection of caves and paleontological resources from adverse effects from visitation.
•Vegetation	Preserve and protect the genetic integrity and species composition within the park, consistent with natural ecosystem processes. To the maximum extent possible, restore altered ecosystems to their natural conditions and ensure the preservation of native components through active management of nonnative components and processes.	Manage river recreational activities to minimize human-caused impacts to native vegetation, reduce the spread of exotic plant species, and preserve fundamental biological and physical processes.
•Terrestrial Wildlife	Preserve and protect the genetic integrity and species composition within the park, consistent with natural ecosystem processes.	Manage river recreational use in a manner that protects native terrestrial wildlife and their habitats, and that preserves wildlife populations by minimizing human-caused wildlife disturbances and habitat alteration.

Resource	General Management Plan Management Objectives	Colorado River Management Plan Management Objectives
•Aquatic Resources	<p>Preserve and protect the genetic integrity and species composition within the park, consistent with natural ecosystem processes.</p> <p>To the maximum extent possible, restore altered ecosystems to their natural conditions and ensure the preservation of native components through active management of nonnative components and processes.</p>	<p>Manage river recreational use in a manner that protects native aquatic organisms, reduces aquatic habitat alteration, and minimizes the spread of exotic species.</p>
•Threatened or Endangered Species	<p>Manage ecosystems to preserve critical processes and linkages that ensure the preservation of rare, endemic, and specially protected (threatened/ endangered) plant and animal species.</p>	<p>Protect all threatened, endangered, sensitive, and candidate species and their habitats from impacts associated with river recreational activities.</p>
Cultural Resources	<p>Preserve, manage, and interpret park cultural resources (archeological, ethnographic, architectural, and historic resources, trails, and cultural landscapes) for the benefit of present and future generations. Manage visitor use, development, and support services to protect the park's resources.</p> <p>Inventory, monitor, and maintain data on park natural and cultural resources and values, and utilize this information in the most effective ways possible to facilitate park management decisions to better preserve the park.</p> <p>Identify and evaluate all cultural properties within the park for inclusion on the National Register of Historic Places.</p> <p>Collect ethnographic data and develop ethno-histories for the Havasupai, Hopi, Hualapai, Navajo, Southern Paiute, and Zuni peoples concerning their associations with the Grand Canyon, as appropriate, in order to preserve, protect, and interpret park resources and values important to diverse American Indian cultures, including significant, sacred, and traditional use areas.</p>	<p>Maintain the integrity of all significant cultural resources, with site preservation the optimal condition. If preservation is not possible, slow the rate at which their essential material qualities are lost.</p> <p>Provide opportunities for present and future populations to understand, experience, and reflect the human history as evidenced through cultural resources in and near the river corridor; protect these resources from adverse effects from visitation.</p> <p>Preserve the integrity and condition of cultural resources and provide opportunities for traditional access by neighboring American Indian tribal members.</p>
Visitor Use and Experience	<p>Provide opportunities for visitors to experience and understand the environmental interrelationships, resources, and values of the Grand Canyon without impairing the resources.</p> <p>Provide a diverse range of quality visitor experiences, as appropriate, based on the resources and values of the Grand Canyon, compatible with the protection of those resources and values.</p> <p>Consistent with park purposes and the characteristics of each landscape unit, preserve and protect the maximum opportunities in every landscape unit of the park for visitors to experience the solitude, natural conditions, primitiveness, remoteness, and inspirational value of the Grand Canyon.</p> <p>Develop visitor use management strategies to enhance the visitor experience while minimizing crowding, conflicts, and resource impacts.</p> <p>Manage the Colorado River corridor through Grand Canyon National Park to protect and preserve the resource in a wild and primitive condition.</p> <p>Provide a wilderness river experience on the Colorado River (this objective will not affect decisions regarding the use of motorboats on the river).</p>	<p>Provide a diverse range of quality recreational opportunities for visitors to experience and understand the environmental interrelationships, resources, and values of Grand Canyon National Park.</p> <p>Levels and types of use enhance visitor experience and minimize crowding, conflicts, and resource impacts.</p> <p>Manage the Colorado River corridor through Grand Canyon National Park to protect and preserve the resource in a wild and primitive condition and provide a wilderness river experience (without affecting decisions regarding the use of motorboats on the river).</p>
Socioeconomic Environment	<p>Understand, assess, and consider the effects of park decisions outside the park as well as inside.</p> <p>Work cooperatively with appropriate entities to encourage compatible, aesthetic, and planned development and recreational opportunities outside park boundaries, and to provide information, orientation, and services to visitors.</p>	<p>Provide a diverse range of recreational opportunities while minimizing the impacts of actions to resources, user groups, and park neighbors.</p>

Resource	General Management Plan Management Objectives	Colorado River Management Plan Management Objectives
<b>Park Operations</b>	<p>Manage and monitor visitor use and park resources in the park's undeveloped areas to preserve and protect the natural and cultural resources and ecosystem processes, and to preserve and maintain a wilderness experience or, where an area is not proposed for wilderness, a primitive experience.</p> <p>Establish indicators and standards for desired visitor experiences and resource conditions, monitor the condition of those indicators on a regular basis, and take action to meet the standards if they are not being met.</p> <p>Provide a variety of primitive recreational opportunities consistent with wilderness and NPS policies on accessibility. In deciding which opportunities would be provided in the undeveloped areas of the park, consider recreational opportunities available outside the park, as well as opportunities available in developed areas of the park.</p>	<p>Ensure sufficient fiscal and human resources necessary to successfully implement the plan.</p>
<b>Adjacent Lands</b>	<p>Understand, assess, and consider the effects of park decisions outside the park as well as inside.</p> <p>Upon request, work cooperatively to assist local American Indians in planning, developing, and managing lands adjoining the park in a mutually compatible manner.</p> <p>Work cooperatively with appropriate entities to encourage compatible, aesthetic, and planned development and recreational opportunities outside park boundaries, and to provide information, orientation, and services to visitors.</p>	<p>Minimize adverse effects from river management to areas outside of the park.</p> <p>Minimize adverse effects of adjacent land activities on park resources and river activities.</p> <p>Work cooperatively with the Hualapai Tribe and other adjacent land managers on alternatives and implementation of a final <i>Colorado River Management Plan</i>.</p>

## BACKGROUND INFORMATION

### PREVIOUS RIVER MANAGEMENT PLANS

The first *Colorado River Management Plan*, which was approved in 1980, addressed the impacts of increasing visitation on the river. The plan prescribed an allocation for commercial and non-commercial users, set seasonal use limits, and consistent with the *Wilderness Recommendation*, called for a five-year phaseout of motorized rafts. To compensate for potential economic hardship associated with eliminating motorized use, the plan lengthened the summer season, allowed winter use, and increased annual user-days for commercial and private users.

In response to the planned phaseout of motorized use, legislation was introduced to prohibit the use of appropriated funds to implement any river management plan that “reduces the number of user days or passenger-launches for commercial motorized watercraft excursions, for the preferred use period, from all current launch points below that which was authorized for the same period in the calendar year 1978” (Department of the Interior Appropriations Act, FY 1981; Public Law 96-514, Dec. 12, 1980; 94 Stat. 2972). In response to that legislation and the possibility of additional legislative intervention, the river management plan was modified. The new plan, finalized in December 1981, retained motorized use and the increase in user-days that had been intended as compensation for the phaseout of motors, resulting in more motorized use of the river. Approximately 77% of commercial trips now are motorized.

To address increasing resource impacts, the 1989 *Colorado River Management Plan* was developed and adopted. This plan retained the commercial and noncommercial user-day allocations, but it added noncommercial launches in the summer to increase opportunities to better utilize the noncommercial allocation. It also prescribed a resource monitoring program and set visitor experience and resource condition standards. The 1989 plan established a temporal recreational opportunity spectrum (ROS), with three experiential opportunity periods:

- High- and moderate-use level periods within the primary season, April 16 through October 15 for noncommercial boaters, and May 1 through September 30 for commercial boaters
- A low-use period within the secondary season, October 16 through April 15
- A non-motor season, September 16 through December 15

In September 2000 several interim changes were announced in the River Permits Office for noncommercial waitlist participants. These changes included providing waitlist participants more time to inform the River Permits Office of their continued interest in remaining on the waiting list, allowing more people greater flexibility in scheduling launch dates, providing an opportunity to list two people as alternate trip leaders, and enabling trip leaders an option to defer their scheduled trips to three years later. An additional change was announced in October 2001 to allow trip leaders to request late additions to their river trip participant list between 90 and 14 days prior to launching.

One final, interim change was made to the waitlist in the fall of 2003. Public comments gathered through the current planning process indicated almost universal dissatisfaction with the waitlist system and resultant wait times. As a result the National Park Service recognized the likelihood that a different permit distribution system could be selected, and much attention was given to the problems and challenges of transitioning between systems. Recognizing that adding more names to the waitlist at this time could only make transitioning between systems harder, the National Park Service placed a temporary moratorium on allowing new additions to the waitlist pending the outcome of this planning process.

## **PUBLIC AND INTERNAL SCOPING**

The National Environmental Policy Act of 1969 requires that the impacts of a major federal action be analyzed and that the public be allowed to participate in the process before decisions are made or actions are implemented. In accordance with this act and its implementing regulations (40 CFR Parts 1500–1508), the National Park Service has engaged the public, affiliated Native American tribes, and concerned stakeholders in the planning process from the onset. An in-depth account of the public involvement process can be found in Chapter 5.

In summer 1997 park staff initiated a review of the 1989 *Colorado River Management Plan* by conducting a series of public workshops. The purpose of the workshops and written comment period was to gather information on the public's perception of river management at Grand Canyon, and to identify issues and potential solutions. A total of 334 individual letters were received, and a database and summary of comments were produced. This scoping process was suspended until the process was restarted in 2002.

From June 13 to November 1, 2002, planning team members sought public input to reaffirm agency and public issues that were previously identified during 1997 (NPS 1998), as well as to identify any new public issues and concerns. Information about the process for developing an environmental impact statement was presented through posters, handouts, and a large map of the project area. Press releases, mailings, and public meetings were used to request public input and to disseminate information. All information was also posted on the park's Colorado River Management Plan website. The park received 13,770 submissions at public meetings, by e-mail, and by regular mail, containing 55,165 individual substantive comments as part of the public scoping effort. (See Appendix B for further details.)

There is almost universal recognition, reflected in public scoping comments, of the special nature of the resources and the experiences in the park's river corridor. People used terms such as superlative, life changing, unique, and awe-inspiring to describe the canyon and their experiences while floating the river, hiking side canyons, and viewing and learning about scenery, wildlife, and the park's natural and cultural resources. Preserving the special values of the river corridor identified by the public and improving recreational opportunities for visitors while protecting resources are included in the objectives for this plan.

## **INTERRELATIONSHIP WITH OTHER PLANS AND PROJECTS**

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### **WILDERNESS RECOMMENDATION**

The Grand Canyon National Park Enlargement Act of 1975 required the National Park Service to prepare a wilderness recommendation for the national park. Following the release of the *Final Environmental Statement for a Wilderness Recommendation*, the park submitted a proposal recommending 1.1 million acres for designation as wilderness, and approximately 29,820 acres as potential wilderness pending the resolution of boundary and motorboat issues.

In 1993 park staff reviewed and updated the 1980 *Wilderness Recommendation*, including refining acreage estimates through the use of Geographical Information Systems. Revisions were consistent with the original recommendation.

In accordance with the NPS *Management Policies 2001*, the National Park Service must manage recommended wilderness as wilderness until action has been taken by Congress to either designate wilderness or remove it from consideration. For potential wilderness, the *Management Policies* require the National Park Service to "seek to remove from potential wilderness the temporary, nonconforming conditions that preclude wilderness designation" (NPS 2000d, sec. 6.3.1). While this environmental impact statement evaluates the appropriate level of motorized raft use on the river, including analyzing two "no-motor" alternatives, the continued use of motorboats does not preclude wilderness designation because this use is only a temporary or transient disturbance of wilderness values on the river, and it does not permanently impact wilderness resources or permanently denigrate wilderness values. Therefore, a revised *Colorado River Management Plan* will not compromise possible future wilderness designation, even if motorized boat use is permitted. This document does not reexamine the park's *Wilderness Recommendation*.



## **BACKCOUNTRY MANAGEMENT PLAN**

The 1988 *Backcountry Management Plan* addresses resource protection and visitor use in the land-based portions of the park's recommended wilderness. The backcountry includes most of the inner canyon, a large portion of the North Rim, and remote areas on the South Rim. The Colorado River serves as a destination for backpackers and hikers. River and backcountry users share camps and attraction sites. The overall river use levels will be evaluated in this revised *Colorado River Management Plan and Environmental Impact Statement* in terms of overlapping uses; however, this environmental impact statement will not evaluate alternatives for resource protection or visitor use alternatives for the entire Grand Canyon backcountry. Management of backcountry wilderness will be addressed through a separate process to be initiated following completion of the river management planning process.

## **WILD AND SCENIC RIVER DESIGNATION**

The park's 1995 *General Management Plan* acknowledges that the Colorado River and selected tributaries in the park meet the criteria for designation under the Wild and Scenic Rivers Act as part of the national system. Prior to designation, a wild and scenic river study must be conducted to determine eligibility, the appropriate classification, and the suitability of the waterways in question. Under a cooperative agreement with Prescott College, the eligibility study for the tributaries and main stem of the Colorado River is nearly complete. Although wild and scenic river designation is beyond the scope of this environmental impact statement, the planning process will likely provide information and management direction that will contribute to the park's ongoing wild and scenic rivers study.

## **COMMERCIAL OVERFLIGHTS**

Commercial aircraft tour routes over the river corridor will be addressed in a separate planning effort and rule-making process in accordance with the National Parks Overflights Act of 1987 (Public Law 100-91). This law directs the National Park Service and Federal Aviation Administration to develop a plan to "provide for substantial restoration of the natural quiet and experience of the park." This environmental impact statement for a river management plan will define resource conditions and desired visitor experiences along the river corridor. Where noise impacts are identified, the information will be forwarded and addressed in a soundscape management plan.

## **ALLOCATION OF ADMINISTRATIVE USE**

Grand Canyon National Park will continue to permit administrative activities, such as research, monitoring, and education, that are based on resource protection, visitor safety, and science needs. Administrative use would be considered as an addition to the recreational use allocation described in each of the alternatives. The intent of the National Park Service is to ensure that the number of administrative trips permitted to launch is appropriate for research, resource management, visitor safety, and educational needs.

The National Park Service will implement a process to evaluate and reduce the impacts to cultural and natural resources and recreational users in accordance with park operating requirements, environmental regulations, and minimum requirement protocols. Administrative trips will be scheduled to minimize launch congestion and campsite competition with recreational users whenever possible.

## **SCOPE OF THIS ENVIRONMENTAL IMPACT STATEMENT**

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This *Draft Environmental Impact Statement* evaluates a full range of alternatives for the identified issues, including visitor use levels, allocation between commercial and noncommercial sectors, motorized raft use, and visitor use management options, as well as comprehensively evaluates impacts to natural and cultural resources from visitor uses on the Colorado River. The plan also considers and analyzes the significant social and economic effects of the various alternatives on the Hualapai Indian Tribe and its trust resources.

Eight alternatives (a no-action alternative and seven action alternatives) are evaluated for the section of the Colorado River from Lees Ferry to Diamond Creek and five alternatives (a no-action alternative and four action alternatives) for the Lower Gorge section of the river, from Diamond Creek to Lake Mead. These alternatives are addressed in detail in Chapter 2.

The *Colorado River Management Plan* is primarily a visitor use management plan, which specifies actions to preserve park resources and the visitor experience, while enhancing recreational opportunities. The plan prescribes standards and measures for visitor experiences and resource conditions that are to be achieved and maintained in the Colorado River corridor over time. The plan creates or modifies standards and programs where management objectives, research, and public input indicate a need. Although this plan is intended to cover at least the next 10 years, some of the plan's goals, objectives, and desired conditions may require a longer period to achieve. The plan prescribes monitoring to measure progress toward meeting resource condition and visitor experience objectives. Inherent in the plan is a commitment by Grand Canyon National Park to provide the budget and staff to implement the plan through adaptive management and a step-up process to respond to the findings of the monitoring program.

The *Colorado River Management Plan* describes management zones that reflect the variety and intensity of visitor activities, particularly in the river segments downstream of Diamond Creek where the Hualapai Tribe and Grand Canyon National Park share boundaries (see Chapter 2 for discussion of zones). The plan addresses cooperative management issues with neighboring units of the national park system, tribal governments, and other agencies with jurisdiction or interests affected by, or that may themselves affect management of the Colorado River corridor in the park. In addition, the plan carefully considers the input of other stakeholders, as expressed in the scoping and stakeholder participation process. Impacts from Glen Canyon Dam operations, administrative use, backcountry operations, and commercial overflights have been incorporated into the cumulative effects analysis. In addition, any provisions within this plan that may have implications for these other issues will be forwarded to the appropriate agencies for consideration.

Prospectuses for commercial outfitter contracts will be issued after a revised *Colorado River Management Plan* has been approved. The provisions of concession contracts and administrative use are not addressed in this plan, but the noncommercial permit system is addressed in detail in Chapter 2. Commercial and noncommercial operating requirements will be developed pursuant to the *Colorado River Management Plan*, and the operating requirements will specify safety and environmental regulations. Guidance for developing and revising the operating requirements, including public involvement and notification, is also provided in this plan.

While this river management plan is intended to have a life of at least 10 years, park managers may periodically review the plan, and if necessary, amend specific sections. If it is determined that the plan has continuing viability, then its effective life may be extended.

## IMPACT TOPICS SELECTED FOR DETAILED ANALYSIS

Impact topics identified for this environmental impact statement are listed below. Identification of these topics was based on public comments, NPS management policies, federal laws, regulations, and executive orders. Additionally, concerns expressed by park resource specialists and other cooperators during the scoping period were considered. According to CEQ regulations (40 CFR 1508.14) the “human environment” shall be interpreted comprehensively to include the natural and physical environment and the relationship of people within that environment.

Impact topics or components of the human environment that could be affected by the alternatives and will be addressed in this document include the following:

Natural Resources	Cultural Resources
Soils	Archeological resources
Water quality	Historic resources
Air quality	Ethnographic resources and traditional cultural properties
Natural soundscape	Visitor use and experience
Caves and paleontological resources	Socioeconomic resources
Vegetation	Park management and operations
Terrestrial wildlife	Adjacent lands
Aquatic resources	
Threatened, endangered, and sensitive species	

## IMPACT TOPICS DISMISSED FROM DETAILED ANALYSIS

The CEQ “Regulations for Implementing the National Environmental Policy Act” (40 CFR Part 1500–1508) and NPS policy (Director’s Order #12) require that certain topics be addressed in an environmental impact statement. The following mandatory topics are not analyzed in this document for the reasons stated below:

- *Energy Requirements and Conservation Potential* — While implementation of some alternatives would entail the expenditure of energy by allowing the use of motorized craft and/or helicopters for the exchange of passengers, this expenditure is not considered a

substantial use of national energy resources. Potential for conserving energy includes the required use of four-stroke outboard motors for boats, which are more fuel efficient than older two-stroke motors, and a strong incentive to implement improved outboard motor technology as it becomes cost-effective.

- *Depletable Resource Requirements and Conservation Potential* — None of the alternatives involves the use of depletable (consumptive) resources.
- *Floodplains* — None of the alternatives has the potential to affect 100-year or 500-year floodplains in regard to critical actions, as defined in the NPS floodplain management guidelines.
- *Prime and Unique Agricultural Lands* — No prime or unique agricultural lands occur in the project area.
- *Cultural Landscapes* — As defined in the NPS *Cultural Resource Management Guideline* (NPS 1998d), cultural landscapes are settings that humans have created in the natural world. By definition, cultural landscapes do not exist along the Colorado River. While cultural landscapes in the form of historic vernacular landscapes do exist at both Lees Ferry and Phantom Ranch, none of the alternatives would affect these areas. Therefore, impacts to cultural landscapes will not be analyzed in this document.
- *Indian Trust Resources* — Indian trust resources are land, water, minerals, timber, and other natural resources held in trust by the United States for the benefit of an Indian tribe or an individual tribal member. No Indian trust resources are located within Grand Canyon National Park. Impacts on nearby Indian reservations and trust resources are discussed in specific resource topics in Chapters 3 and 4.
- *Environmental Justice* — Executive Order 12898 requires consideration of impacts to minority and low-income populations to ensure that these populations do not receive a disproportionately high number of adverse human health impacts. This issue was dismissed from further analysis for this plan because no alternative would disproportionately impact the health and local environment of minority or low-income populations. Specific impacts to the socioeconomic environment and natural and cultural resources associated with tribal populations are addressed in Chapter 4 of this document.

